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## METHOD AND APPARATUS FOR ELECTROMAGNETIC INDUCTION HEATING OF LAMINATE

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Application

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EC Classification:

Equivalents:

### Abstract

**PROBLEM TO BE SOLVED:** To provide a method for electromagnetic induction heating of a laminate which curtails the vulcanization time of the laminate remarkably to improve production efficiency and reduces the temperature difference between the outer part and inner part of the laminate during heating to make the quality uniform and to improve the quality as a whole.

**SOLUTION:** In a method for electromagnetic induction-heating an unvulcanized rubber layer by a method in which lines of magnetic force generated by passing alternating current through electromagnetic induction coils 3 arranged around a cylindrical laminate A in which circular thin steel plates and circular unvulcanized rubber layers are laminated alternately are made to penetrate the steel plates of the laminate A perpendicularly so that eddy current is passed through the steel plates to make them emit heat, a central part opening (a) penetrating vertically is formed in advance in the central shaft part of the laminate A in the coil 3, an outer magnetic path type electromagnetic induction heating device 5 equipped with an electromagnetic induction coil 7 is inserted into the opening (a), and the unvulcanized rubber layers are heated from both inside and outside.

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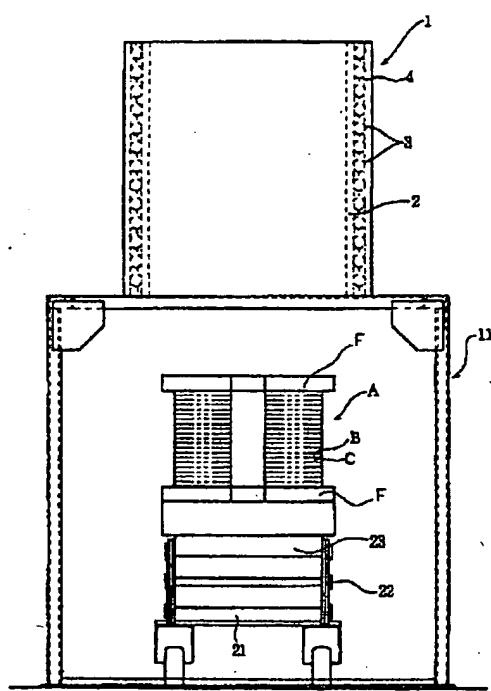
場合に置ける本発明による予熱時・加硫時の最高温度と最低温度を示す温度線図と、従来の蒸気による加硫時の最高温度と最低温度を示す温度線図である。

## 【符号の説明】

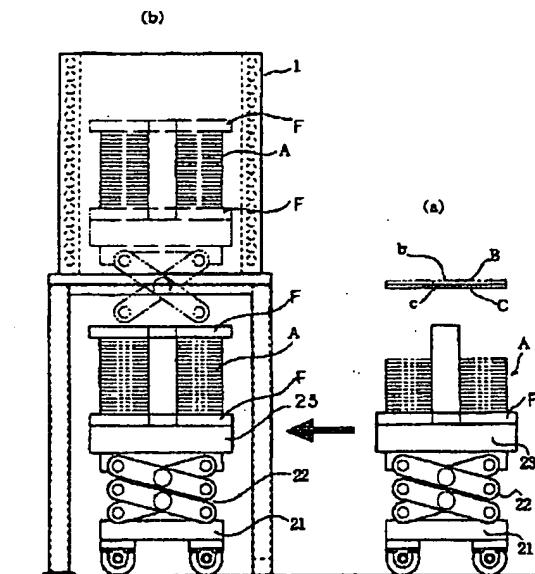
- 1・1<sub>1</sub>・1<sub>2</sub>・1<sub>3</sub>・1<sub>4</sub> 電磁誘導加熱装置
- 2・4 円筒状ケース
- 3 電磁誘導用コイル
- 5 電磁誘導加熱装置
- 6・8 円管状ケース
- 7 電磁誘導用コイル
- 10 角柱状磁束(電磁波)収集体

- 11 枠状架台
- 12 プラグピン
- 15・16・17 热電対(温度センサー)
- 21 台車
- 22 昇降機構
- 23 載置台
- 31 中芯
- A 積層体
- B 未加硫ゴム層
- C 鋼板
- F フランジ

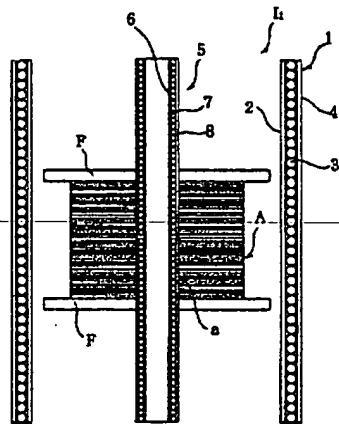
【図1】



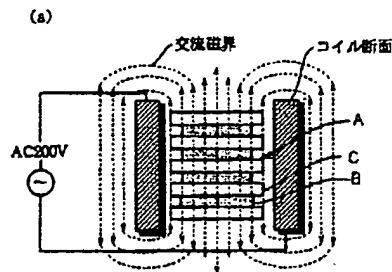
【図2】



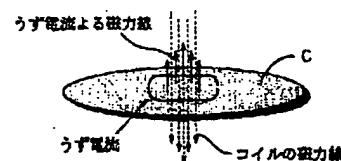
【図4】



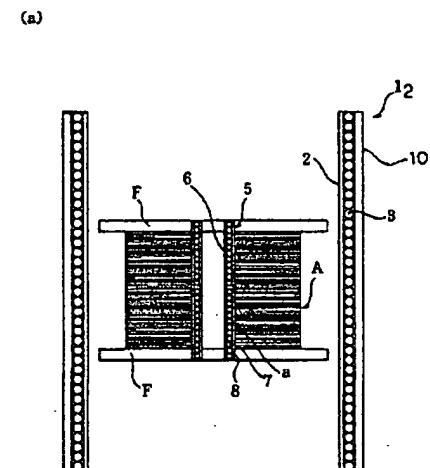
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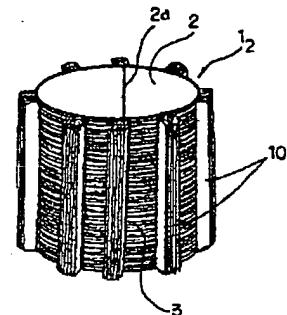
(b)



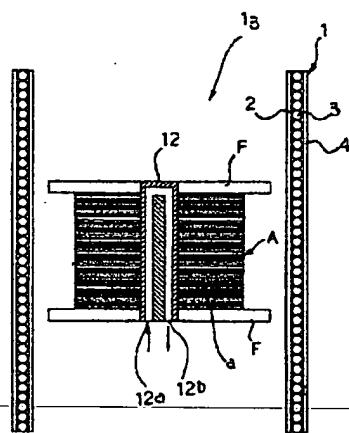
【図5】



(b)

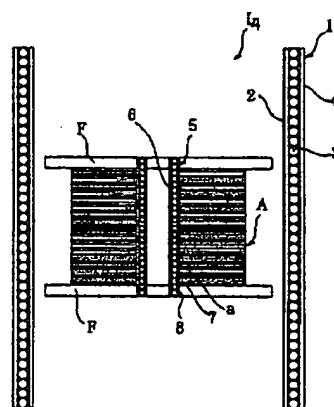


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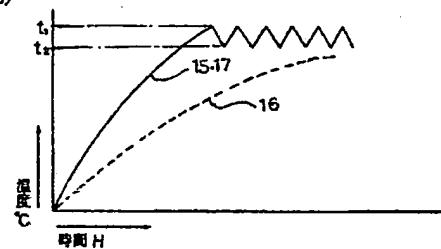


【図7】

(a)



(b)



【図8】

